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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,211	04/14/2004	Claudia Dorenkamp	37105.0053	6284
26712	7590	08/31/2007		
HODGSON RUSS LLP THE GUARANTY BUILDING 140 PEARL STREET SUITE 100 BUFFALO, NY 14202-4040			EXAMINER DOERRLER, WILLIAM CHARLES	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 08/31/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/824,211

Applicant(s)

DORENKAMP ET AL.

Examiner

William C. Doerrler

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of the '704 or '792 UK patents from the IDS in view of either Chevalier et al or Jacobs.

Each of the UK patents disclose applicant's basic inventive concept, a microtome with an associated cryostat and a light source, substantially as claimed with the exception of using modular LED assemblies which may be dimmed as the light source and placing the illumination device inside the cryostat. Chevalier et al and Jacobs each show dimmable LEDs to be old in the illumination art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of either Chevalier et al or Jacobs to modify the microtome of either of the UK patents by using dimmable LED modules for the light source to provide highly controllable, efficient light that also produces less heat. It is considered obvious to place the LEDs in the cryostat. The UK patents predate the common use of LEDs as lightsources (other than

indicators). As the LED art progressed to produce more light, while still emitting far less heat than incandescent bulbs, their use in thermally controlled environments became increasingly obvious. Light sources are most useful when they directly illuminate the object desired to be seen. The best way to directly illuminate the device being sliced with a microtome in a cryostat, is to place the illumination device inside the cryostat. This could not have been done 25 years ago, as the commonly available incandescent bulbs produced too much heat to efficiently maintain the cryogenic environment. The progress in LEDs as shown by Chevalier et al and Jacobs, make LEDs attractive in environments where heat produced by the light source becomes a factor.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '704 or '792 UK patent in view of either Chevalier et al or Jacobs as applied to claims 1-8 above, and further in view of either Choi et al or Kanao et al.

Either of the UK patents, as modified, discloses applicant's basic inventive concept, a microtome with a cryostat and a dimmable LED light source, substantially as claimed with the exception of providing a switch controllable with the opening and closing of the cover and shielding the LEDs. Choi et al and Kanao et al each show these features to be old in the illumination art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of either Choi et al or Kanao et al to modify the microtome of either UK patent by controlling the LEDs with the opening or closing of the cover, to ensure that light is provided when it is needed, while not wasting energy, and to provide a shield to protect the LEDs from damage.

### ***Response to Arguments***

Applicant's arguments filed 8-6-2007 have been fully considered but they are not persuasive. While Biehl's light is outside the cryostat, the placement of the LEDs inside the cryostat is still seen as obvious. Biehl is from the same time period as the UK patents used as primary references. The light of Biehl produced heat, so to place it in the cryostat would have diminished the efficiency of the cryostat. As LEDs are known to produce significantly less heat, their placement in the cryostat effects the efficiency of the cryostat far less. This leads one of ordinary skill in the art to consider placing the LEDs in the cryostat, as this would obviously provide the most direct illumination. One of ordinary skill in the art would recognize that the UK patents use the external lights to reduce heat transfer to the sample. Jacobs and Chevalier et al teach to use of LEDs to provide a highly controllable lightsource, which also provides very little heat. The combination of these teachings would lead an ordinary practitioner in the art to provide a cryostat with internal LEDs to provide the best image possible, efficiently and reliably.

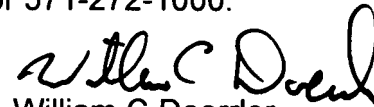
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (571) 272-4807. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William C Doerrler  
Primary Examiner  
Art Unit 3744

WCD